OIPE JC14
APR 23 2004
PATENT & TRADEMARK OFFICE

ABSTRACT

[0068] A device in accordance with embodiments of the present invention comprises an atomic probe for high density data storage reading, writing, erasing, or rewriting. In one embodiment, the atomic probe can include a core having a conductive coating. The core can comprise an insulating or conducting material, and the coating can comprise one or more of titanium nitride, platinum, diamond-like carbon, tungsten carbide, tungsten, and tungsten oxide. Atomic probes in accordance with the present invention can be applied to a phase change media, for example to form an indicia in the phase change media by changing the structure of a portion of the media from one of a crystalline or amorphous structure to the other of the crystalline and amorphous structure.